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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,468	03/23/2007	Jan Hall	NOBELB.245NP	4924

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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

MAI, HAO D

ART UNIT	PAPER NUMBER
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3732

NOTIFICATION DATE	DELIVERY MODE
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08/05/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
efiling@kmob.com
eOAPilot@kmob.com

Office Action Summary	Application No. 10/582,468	Applicant(s) HALL, JAN	
	Examiner HAO D. MAI	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-10, 14-16, 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 3-6, 9-10, and 14-15, are rejected under 35 U.S.C. 102(b) as anticipated by Blanquaert (4,261,063).**

Regarding claim 1, Blanquaert discloses a dental component, i.e. titanium bone prosthetic pin 1, capable of extending at least partially in a hole formed in the jaw bone and through soft tissue belonging to the jaw bone (Figs. 1-3). The dental component 1 including the lattice mesh layers 6A, 6B, are of titanium, and further comprise at least one layer of surface coating of anatase-phase titanium dioxide, which is applied thereon by anodic oxidation at 20 - 200 volts (Figs. 1-2; column 1 lines 51-53; column 2 lines 8-12). Blanquaert discloses subjecting the whole assembly to anodic oxidation at 20 – 200 volts in order to obtain a coating or surface layer of anatase-phase titanium dioxide (column 2 lines 44-53). Therefore, it is inherently that 70%-100% of the surface layer is in anatase-phase titanium dioxide.

As to claim 3, Blanquaert discloses the surface layer of anatase being 3000 to 3500 angstroms (column 2 lines 52-53), which is converted to be 0.30 - 0.35 μm . Such range is within the claimed range of 0.05 - 10 μm . **As to claims 4-5, 10, and 14-15**, Blanquaert discloses covering about 2/3 (i.e. portions 9, 11, 14, 16) of the titanium bone prosthetic pin 1 with the titanium wire 6A, 6B; whereas the head portions 9B and 10 are uncovered. Blanquaert then discloses subjecting the whole assembly to anodic oxidation; therefore the whole

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component is coated with anatase-phase titanium dioxide. Accordingly, such coating means a majority of and/or a plurality of the outer surfaces of the dental component are provided with crystalline titanium dioxide in the anatase phase. **As to claims 6 and 9**, there are multiple threadless portions of pin 1 that are capable of being placed against soft tissue.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 7-8, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blanquaert in view of Sachdeva et al. (5,697,779).**

Regarding claim 8, Blanquaert fail to disclose an outer threaded portion. Instead, Blanquaert discloses scaly structure 14. Nonetheless, it is well known in the in the medical or dental bone prosthesis/implant field to include a threaded portion to tap and anchor into the bone. For example, Sachdeva et al. disclose a dental implant having a threaded boy 12 in order to anchor into the jawbone. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanquaert by including a threaded portion, and/or substitute the scaly structure with a threaded portion, in order to efficiently anchor and integrate into the bone.

Regarding claims 7, 16, and 18, Blanquaert fails to disclose the bone stimulation substance comprises BMP (bone morphogenetic protein). Nonetheless, it is well known in the medical or dental bone prosthesis/implant field to coat the prosthesis/implant with

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osteoinductive factor such as growth factor or bone morphogenetic protein. For example, Sachdeva et al. discloses coating a dental implant with bone morphogenetic protein for osteoinductive purposes (column 7 lines 16-36). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanquaert by including bone morphogenetic protein as bone stimulation substance since it has been held since it has been held to be within the general skill of an artisan to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

Response to Arguments

5. Applicant's arguments with respect to previous grounds of rejection under Sul et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Blanquaert as detailed above.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAO D. MAI whose telephone number is (571)270-3002. The examiner can normally be reached on Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Hao D Mai/
Examiner, Art Unit 3732**

/Ralph A. Lewis/
Primary Examiner, Art Unit 3732